

Community Assistantship Program

**Assessment of Public Health Needs in Four Counties in
Western Minnesota**

Assessment of Public Health Needs in Four Counties in Western Minnesota

Prepared in partnership with
Lincoln, Lyon, Murray & Pipestone Public Health Services

Prepared by
Hassan Ghomrawi
Graduate Student

University of Minnesota
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Center for Urban and Regional Affairs (CURA)
University of Minnesota
330 HHH Center
301--19th Avenue South
Minneapolis, Minnesota 55455

Phone: (612) 625-1551

Fax: (612) 626-0273

E-mail: cura@umn.edu

Web site: <http://www.cura.umn.edu>

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Assessment of Public Health Needs in 4 Counties in Western Minnesota

A Report To

Lincoln-Lyon-Murray-Pipestone
Public Health Services

Prepared

By

Hassan Ghomrawi, MPH

Date: 6/11/04

Introduction:

Lincoln-Lyon-Murray-Pipestone Public Health Services (LLMP-PHS) is an public agency that services the public health needs of four counties in Western Minnesota: Lincoln, Lyon, Murray, and Pipestone. Early in summer of 2003, the agency started looking for a qualified person to work with the LLMP-PHS project team to develop priority areas for the next four years, with an emphasis or focus on aligning with statewide objectives and measurable outcomes in accordance with the Minnesota Department of Health (MDH).

The agency recruited me through the Center of Urban and Regional affairs at the University of Minnesota in July of 2003. Because of the remote location of the public health agency from the University of Minnesota (150 miles distance), most contact with the agency was done over the phone and by email. The process was very efficient and we were able to deliver reasonable and meaningful results in the short time allowed for my position with the agency. However, I had to make two site visits to the agency one in August and another in November of 2003. And we also had occasional teleconferences.

The agency's main goal was to comply with the public health grant guidelines of the Minnesota Department of Health (MDH) while at the same time serving the most pressing and important needs of the 4 counties which the agency serves. The specific requirements of my position were:

- 1- compile and analyze existing data from a variety of sources, including the Minnesota Department of Health and a recent 27-county study including the four counties served
- 2- conduct and summarize focus groups

- 3- survey or interview community leaders and decision makers regarding prioritization of CHS programs
- 4- work with the project team to develop priority areas for the next four years, with an emphasis or focus on aligning with statewide objectives and measurable outcomes
- 5- assist in writing parts of the CHS plan for submission to the MDH

The analysis Process

To prioritize public health needs, LLMP-PHS used feedback from both: 1) individual citizens living in the 4 counties and 2) community leaders. The agency also used existing literature to support rationale for activities that were new to the agency as well as to already existing activities.

The main specific tasks that I helped the agency with were:

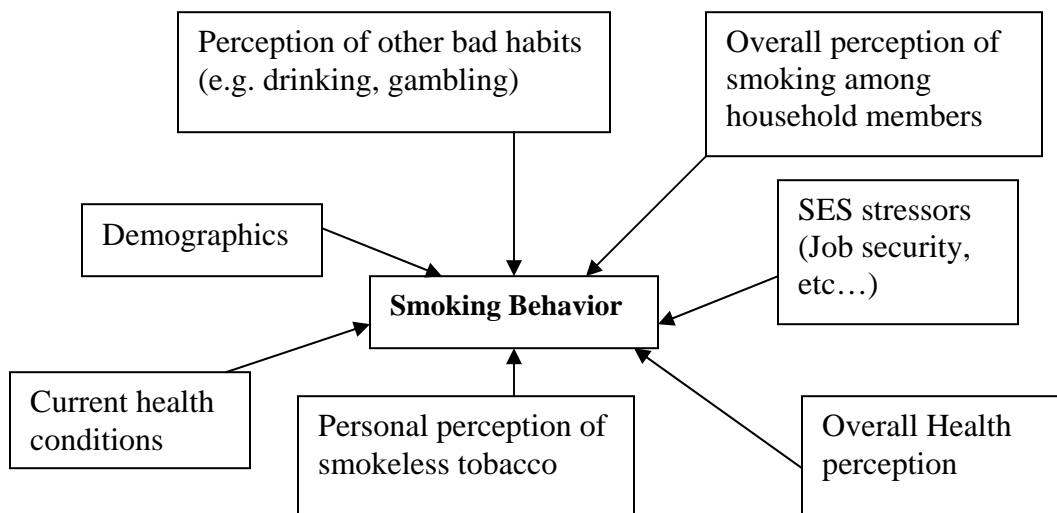
- 1- Analyze the statewide tobacco smoking survey and compare Lincoln, Lyon, Murray and Pipestone's results to those of the state as well as analyze trends over time. The survey was administered in 1998 and 2002.
- 2- Scan existing literature and surveys done in the state of Minnesota as well as nationwide to support all health priorities that the agency felt were necessary for the 4 counties. A useful source was the regional health profile of each of the counties and the Minnesota Student Survey provided online by the Minnesota Department of Health. For example, I was asked to investigate the viability and importance of the role public health nurses in schools.

- 3- Analyze administrative and financial data pertaining to the public health lab that provides water testing services to the 4 counties and other nearby counties and private parties.
- 4- Develop and update a survey of community leaders that requested their preferences on each of the general public health topics that the MDH has set as domains of interest.

Analysis Results

Conceptual Framework:

(Factors affecting a person's smoking behavior)



RHP Survey Analysis:

RHP survey results of 1998 and 2002 were analyzed for the entire Minnesota population (only 1998) and the 4 counties in specific (2002). The two surveys were different on several questions because of improvement on the RHP survey in 2002; therefore one would expect instrumentation bias in some respect. In what follows are tables that compare smoking behavior and factors affecting such behavior for 1998 and 2002.

Prevalence of Cigarette Smoking:

	2002 (4 counties) N= 1492	2002 (27 counties) N=10485	1998 (27 counties) N=11212
Yes, I smoke	10.7%	13.5%	16.1%
No I have stopped smoking	40.0%	40.0%	83.9%
No, I have never smoked	49.0%	46.6%	
Missing	2.7%	3.3%	2.7%

Overall Health Perception:

		2002 (4 counties) N= 1492	2002 (27 counties) N=10485	1998 (27 counties) N=11212
Yes, I smoke	Excellent	13.3	11.3	15.3
	Good	65.2	63.4	66.0
	Fair	19.6	22.1	16.7
	Poor	1.9	3.2	2.1
No I have stopped smoking	Excellent	16.0	15.6	24.5
	Good	55.2	58.7	58.9
	Fair	24.3	21.8	14.7
	Poor	4.6	3.9	1.9
No, I have never smoked	Excellent	22.6	23.0	24.5
	Good	58.3	60.2	58.9
	Fair	16.8	14.9	14.7
	Poor	2.3	2.0	1.9

In what follows, each of the factors affecting smoking behavior is analyzed. The first set of analysis is for 4 counties in 2002. Further analysis is then done separately for 27 counties in 2002 and finally for 27 counties in 1998.

4 Counties in 2002:

Current Health Conditions:

		cigarettes smoking		
		Yes	No, I have stopped smoking	No, I have never smoked
Arthritis	Count	37	200	197
	Row %	8.5%	46.1%	45.4%
Asthma	Count	8	59	47
	Row %	7.0%	51.8%	41.2%
Cancer	Count	10	83	69
	Row %	6.2%	51.2%	42.6%
Depression	Count	28	63	72
	Row %	17.2%	38.7%	44.2%
Diabetes	Count	10	86	56
	Row %	6.6%	56.6%	36.8%
Heart Disease	Count	11	108	74
	Row %	5.7%	56.0%	38.3%
Lung Disease	Count	6	36	8
	Row %	12.0%	72.0%	16.0%
Stroke	Count	4	29	16
	Row %	8.2%	59.2%	32.7%
Anxiety or panic attack	Count	18	45	46
	Row %	16.5%	41.3%	42.2%
Illness or injury due to agrichemicals or toxins	Count	1	5	6
	Row %	8.3%	41.7%	50.0%
Other Health Condition	Count	21	57	69
	Row %	14.3%	38.8%	46.9%

		# of cigarettes/day				
		1-10 cigarettes	11-20 cigarettes	21-30 cigarettes	31-40 cigarettes	41 or more cigarettes
Arthritis	Count	15	12	8	2	
	Row %	40.5%	32.4%	21.6%	5.4%	
Asthma	Count	1	4	2	1	
	Row %	12.5%	50.0%	25.0%	12.5%	
Cancer	Count	7	3			
	Row %	70.0%	30.0%			
Depression	Count	12	10	2	3	1
	Row %	42.9%	35.7%	7.1%	10.7%	3.6%
Diabetes	Count	4	4	1	1	
	Row %	40.0%	40.0%	10.0%	10.0%	
Heart Disease	Count	2	6	2		1
	Row %	18.2%	54.5%	18.2%		9.1%
Lung Disease	Count	2	3		1	
	Row %	33.3%	50.0%		16.7%	
Stroke	Count		3	1		
	Row %		75.0%	25.0%		
Anxiety or panic attack	Count	5	6	2	4	1
	Row %	27.8%	33.3%	11.1%	22.2%	5.6%
Illness or injury due to agrichemicals or toxins	Count	1				
	Row %	100.0%				
Other Health Condition	Count	4	9	3	3	2
	Row %	19.0%	42.9%	14.3%	14.3%	9.5%

Perception of other bad habits:

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
Played pull tabs	Count		25	29	25	4	75
	Row %		31.6%	36.7%	31.6%	5.1%	94.9%
Played scratch cards or games	Count		20	64	44	6	121
	Row %		15.6%	50.0%	34.4%	4.7%	95.3%
Played the lottery	Count		33	94	77	9	189
	Row %		16.2%	46.1%	37.7%	4.5%	95.5%
Played cards for money	Count		4	28	24	3	52
	Row %		7.1%	50.0%	42.9%	5.5%	94.5%
Played bingo for money	Count		5	16	23		39
	Row %		11.4%	36.4%	52.3%		100.0%
Gambled at a casino	Count		28	86	62	6	164
	Row %		15.9%	48.9%	35.2%	3.5%	96.5%
None of the above	Count		88	360	533	19	925
	Row %		9.0%	36.7%	54.3%	2.0%	98.0%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
0 days/ I don't drink	Count		43	242	311	7	553
	Row %		7.2%	40.6%	52.2%	1.3%	98.8%
1-3 days	Count		48	151	213	5	396
	Row %		11.7%	36.7%	51.7%	1.2%	98.8%
4-10 days	Count		29	74	111	9	204
	Row %		13.6%	34.6%	51.9%	4.2%	95.8%
11-17 days	Count		16	37	33	6	80
	Row %		18.6%	43.0%	38.4%	7.0%	93.0%
18-24 days	Count		8	27	15	4	46
	Row %		16.0%	54.0%	30.0%	8.0%	92.0%
25 or more days	Count		15	38	14	4	63
	Row %		22.4%	56.7%	20.9%	6.0%	94.0%

Perception of the dangers of tobacco smoking:

1-Health beliefs:

			cigarettes smoking		
			Yes	No, I have stopped smoking	No, I have never smoked
agree or disagree- kids more likely to smoke if adults around them do	Strongly agree	Count	33	246	386
		Row %	5.0%	37.0%	58.0%
	Agree	Count	65	251	270
		Row %	11.1%	42.8%	46.1%
	Disagree	Count	50	64	43
		Row %	31.8%	40.8%	27.4%
	Strongly disagree	Count	10	10	1
		Row %	47.6%	47.6%	4.8%
agree or disagree- preventing cigarette smoking among youth is everyone's responsibility	Strongly agree	Count	61	261	376
		Row %	8.7%	37.4%	53.9%
	Agree	Count	79	255	271
		Row %	13.1%	42.1%	44.8%
	Disagree	Count	15	40	44
		Row %	15.2%	40.4%	44.4%
	Strongly disagree	Count	3	9	6
		Row %	16.7%	50.0%	33.3%
agree or disagree- i feel my community is committed to preventing youth from smoking.	Strongly agree	Count	23	74	74
		Row %	13.5%	43.3%	43.3%
	Agree	Count	90	292	367
		Row %	12.0%	39.0%	49.0%
	Disagree	Count	36	162	219
		Row %	8.6%	38.8%	52.5%
	Strongly disagree	Count	9	18	24
		Row %	17.6%	35.3%	47.1%

2-Perception by Age

cigarettes smoking: how much of a problem is tobacco use by young people		Mean	N	Std. Deviation
Yes	Not a problem	52.70	10	13.532
	A minor problem	48.11	53	16.483
	A moderate problem	47.22	73	13.379
	A serious problem	46.50	18	12.618
	Total	47.80	154	14.387
No, I have stopped smoking	Not a problem	76.83	29	8.759
	A minor problem	66.70	110	15.634
	A moderate problem	59.68	314	16.111
	A serious problem	61.39	101	17.667
	Total	62.28	554	16.565
No, I have never smoked	Not a problem	76.00	21	15.323
	A minor problem	55.50	128	21.072
	A moderate problem	53.95	411	18.769
	A serious problem	52.46	116	17.327
	Total	54.67	676	19.263
Total	Not a problem	72.52	60	14.965
	A minor problem	58.39	291	19.601
	A moderate problem	55.59	798	17.712
	A serious problem	55.84	235	17.837
	Total	56.95	1384	18.357

SES stressors:

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
family support	Receive support from family	Count	98	408	565	23	1016
		Row %	9.2%	38.1%	52.8%	2.2%	97.8%
church support	Receive support from church	Count	40	287	380	12	667
		Row %	5.7%	40.6%	53.7%	1.8%	98.2%
Friends support	Receive support from friends	Count	89	334	487	26	858
		Row %	9.8%	36.7%	53.5%	2.9%	97.1%
I manage alone	I manage alone	Count	55	119	137	7	303
		Row %	17.7%	38.3%	44.1%	2.3%	97.7%
other support/ specify	Receive other support	Count	3	14	27	1	42
		Row %	6.8%	31.8%	61.4%	2.3%	97.7%

feel positive	Almost always	Count	64	246	300	16	576
		Row %	10.5%	40.3%	49.2%	2.7%	97.3%
	Often	Count	61	222	276	15	525
		Row %	10.9%	39.7%	49.4%	2.8%	97.2%
	Occasionally	Count	27	88	105	5	208
		Row %	12.3%	40.0%	47.7%	2.3%	97.7%
	Almost never	Count	6	9	12		26
		Row %	22.2%	33.3%	44.4%		100.0%
	sadness; loss of interest	Count	48	126	145	7	304
		Row %	15.0%	39.5%	45.5%	2.3%	97.7%
	No	Count	108	428	539	28	1012
		Row %	10.0%	39.8%	50.1%	2.7%	97.3%

personal loss, stress, misfortune	Yes	Count	64	184	254	11	475
		Row %	12.7%	36.7%	50.6%	2.3%	97.7%
	No	Count	92	387	436	25	861
		Row %	10.1%	42.3%	47.7%	2.8%	97.2%

gender	Male	Count	75	304	210	28	558
		Row %	12.7%	51.6%	35.7%	4.8%	95.2%
	Female	Count	84	265	487	7	788
		Row %	10.0%	31.7%	58.3%	.9%	99.1%

Hispanic or Latino	Yes	Count	2	6	1	2	5
		Row %	22.2%	66.7%	11.1%	28.6%	71.4%
	No	Count	154	546	674	34	1306
		Row %	11.2%	39.7%	49.1%	2.5%	97.5%

White	White	Count	157	572	694	35	1343
		Row %	11.0%	40.2%	48.8%	2.5%	97.5%
American Indian	American Indian	Count	1	1	1		3
		Row %	33.3%	33.3%	33.3%		100.0%
Black	.	Count					
		Row %					
Asian	Asian	Count		1	4		5
		Row %		20.0%	80.0%		100.0%
Other: please specify	Other: please specify	Count	1	1	3	1	4
		Row %	20.0%	20.0%	60.0%	20.0%	80.0%

Occupation:

best describes you/ working one or more jobs	Working one or more jobs, self- employed or farmer	Count	109	249	405	18	737
		Row %	14.3%	32.6%	53.1%	2.4%	97.6%
best describes you/ homemaker	Homemaker	Count	12	79	150	2	224
		Row %	5.0%	32.8%	62.2%	.9%	99.1%
best describes you/ retired	Retired	Count	29	274	220	13	474
		Row %	5.5%	52.4%	42.1%	2.7%	97.3%
best describes you/ student	Student	Count	5	7	12	2	22
		Row %	20.8%	29.2%	50.0%	8.3%	91.7%
best describes you/ currently looking for work	Currently looking for work	Count	9	9	9	4	24
		Row %	33.3%	33.3%	33.3%	14.3%	85.7%
best describes you/ unable to work	Unable to work	Count	11	29	25	3	56
		Row %	16.9%	44.6%	38.5%	5.1%	94.9%
best describes you/ other	Other: please specify	Count	4	25	27	2	51
		Row %	7.1%	44.6%	48.2%	3.8%	96.2%

Educational level:

education level	Some high school	Count	17	89	71	8	150
		Row %	9.6%	50.3%	40.1%	5.1%	94.9%
	High school graduate	Count	61	205	213	12	450
		Row %	12.7%	42.8%	44.5%	2.6%	97.4%
	Vo-tech training or some college	Count	47	129	169	11	324
		Row %	13.6%	37.4%	49.0%	3.3%	96.7%
	Associates degree	Count	12	24	42	2	75
		Row %	15.4%	30.8%	53.8%	2.6%	97.4%
	Bachelors degree	Count	11	63	121	2	193
		Row %	5.6%	32.3%	62.1%	1.0%	99.0%
	Post-graduate or professional degree	Count	3	26	63		91
		Row %	3.3%	28.3%	68.5%		100.0%
	Other: please specify	Count	6	36	24	1	62
		Row %	9.1%	54.5%	36.4%	1.6%	98.4%

Household Income:

gross income	\$0-\$9,999	Count	11	53	58	3	108
		Row %	9.0%	43.4%	47.5%	2.7%	97.3%
	\$10,000-\$19,999	Count	29	103	111	8	217
		Row %	11.9%	42.4%	45.7%	3.6%	96.4%
	\$20,000-\$29,999	Count	26	87	98	2	201
		Row %	12.3%	41.2%	46.4%	1.0%	99.0%
	\$30,000-\$39,999	Count	28	97	102	9	216
		Row %	12.3%	42.7%	44.9%	4.0%	96.0%
	\$40,000-\$59,999	Count	33	108	154	4	286
		Row %	11.2%	36.6%	52.2%	1.4%	98.6%
	\$60,000 or more	Count	23	76	130	7	221
		Row %	10.0%	33.2%	56.8%	3.1%	96.9%

Social pressure:

cigarettes smoking * anyone smoke inside your home

		cigarettes smoking			Total
		Yes	No, I have stopped smoking	No, I have never smoked	
Yes	Count	75	34	28	137
	% across	54.7%	24.8%	20.4%	100.0%
No	Count	84	540	672	1296
	% across	6.5%	41.7%	51.9%	100.0%
Total	Count	159	574	700	1433
	% across	11.1%	40.1%	48.8%	100.0%

			cigarettes smoking	# of cigarettes/day				
			Yes	1-10 cigarettes	11-20 cigarettes	21-30 cigarettes	31-40 cigarettes	41 or more cigarettes
when eating out, which do you prefer	A restaurant that is smoke free	Count	16	9	4	3		
		Row %	100.0%	56.3%	25.0%	18.8%		
	A restaurant with designated smoking/non-smoking sections	Count	130	38	54	27	8	2
		Row %	100.0%	29.5%	41.9%	20.9%	6.2%	1.6%
	A restaurant that allows smoking anywhere	Count	13	4	4	2	2	1
		Row %	100.0%	30.8%	30.8%	15.4%	15.4%	7.7%
how much of a problem is tobacco use by young people	Not a problem	Count	10	4	2	2	2	
		Row %	100.0%	40.0%	20.0%	20.0%	20.0%	
	A minor problem	Count	53	19	21	10	1	2
		Row %	100.0%	35.8%	39.6%	18.9%	1.9%	3.8%
	A moderate problem	Count	75	21	30	16	7	
		Row %	100.0%	28.4%	40.5%	21.6%	9.5%	
	A serious problem	Count	18	6	7	4		1
		Row %	100.0%	33.3%	38.9%	22.2%		5.6%

27 counties in 2002:

Current health conditions:

		cigarettes smoking		
		Yes	No, I have stopped smoking	No, I have never smoked
Arthritis	Count	289	1323	1244
	Row %	10.1%	46.3%	43.6%
Asthma	Count	105	320	329
	Row %	13.9%	42.4%	43.6%
Cancer	Count	88	492	430
	Row %	8.7%	48.7%	42.6%
Depression	Count	271	538	555
	Row %	19.9%	39.4%	40.7%
Diabetes	Count	95	465	351
	Row %	10.4%	51.0%	38.5%
Heart Disease	Count	101	685	404
	Row %	8.5%	57.6%	33.9%
Lung Disease	Count	45	167	57
	Row %	16.7%	62.1%	21.2%
Stroke	Count	39	155	112
	Row %	12.7%	50.7%	36.6%
Anxiety or panic attack	Count	167	317	301
	Row %	21.3%	40.4%	38.3%
Illness or injury due to agricultural chemicals or toxins	Count	28	34	35
	Row %	28.9%	35.1%	36.1%
Other Health Condition	Count	158	460	494
	Row %	14.2%	41.4%	44.4%

			# of cigarettes/day				
			1-10 cigarettes	11-20 cigarettes	21-30 cigarettes	31-40 cigarettes	41 or more cigarettes
Arthritis	Count		92	106	52	18	10
	Row %		33.1%	38.1%	18.7%	6.5%	3.6%
Asthma	Count		37	42	15	5	6
	Row %		35.2%	40.0%	14.3%	4.8%	5.7%
Cancer	Count		32	38	10	3	5
	Row %		36.4%	43.2%	11.4%	3.4%	5.7%
Depression	Count		98	97	46	18	9
	Row %		36.6%	36.2%	17.2%	6.7%	3.4%
Diabetes	Count		27	32	20	9	5
	Row %		29.0%	34.4%	21.5%	9.7%	5.4%
Heart Disease	Count		30	35	19	8	9
	Row %		29.7%	34.7%	18.8%	7.9%	8.9%
Lung Disease	Count		15	14	3	5	8
	Row %		33.3%	31.1%	6.7%	11.1%	17.8%
Stroke	Count		15	12	9		3
	Row %		38.5%	30.8%	23.1%		7.7%
Anxiety or panic attack	Count		53	66	26	13	8
	Row %		31.9%	39.8%	15.7%	7.8%	4.8%
Illness or injury due to agricultural chemicals or toxins	Count		8	5	5	2	6
	Row %		30.8%	19.2%	19.2%	7.7%	23.1%
Other Health Condition	Count		45	63	28	11	9
	Row %		28.8%	40.4%	17.9%	7.1%	5.8%

Perceptions of other bad habits:

		cigarettes smoking		
		Yes	No, I have stopped smoking	No, I have never smoked
Played pull tabs	Count	203	350	248
	Row %	25.3%	43.7%	31.0%
Played scratch cards or games	Count	264	529	409
	Row %	22.0%	44.0%	34.0%
Played the lottery	Count	342	819	657
	Row %	18.8%	45.0%	36.1%
Played cards for money	Count	62	208	162
	Row %	14.4%	48.1%	37.5%
Played bingo for money	Count	57	123	113
	Row %	19.5%	42.0%	38.6%
Gambled at a casino	Count	192	587	405
	Row %	16.2%	49.6%	34.2%
None of the above	Count	701	2372	3365
	Row %	10.9%	36.8%	52.3%

			cigarettes smoking		
			Yes	No, I have stopped smoking	No, I have never smoked
0 days/ I don't drink	Count	418	1545	2048	
	Row %	10.4%	38.5%	51.1%	
1-3 days	Count	390	1072	1402	
	Row %	13.6%	37.4%	49.0%	
4-10 days	Count	238	615	726	
	Row %	15.1%	38.9%	46.0%	
11-17 days	Count	85	245	215	
	Row %	15.6%	45.0%	39.4%	
18-24 days	Count	85	205	125	
	Row %	20.5%	49.4%	30.1%	
25 or more days	Count	140	282	111	
	Row %	26.3%	52.9%	20.8%	

Perceptions of the dangers of cigarette smoking
Health beliefs:

			cigarettes smoking		
			Yes	No, I have stopped smoking	No, I have never smoked
agree or disagree- kids more likely to smoke if adults around them do	Strongly agree	Count	282	1869	2544
		Row %	6.0%	39.8%	54.2%
	Agree	Count	612	1707	1763
		Row %	15.0%	41.8%	43.2%
	Disagree	Count	393	351	306
		Row %	37.4%	33.4%	29.1%
	Strongly disagree	Count	64	54	38
		Row %	41.0%	34.6%	24.4%
agree or disagree- preventing cigarette smoking among yourth is everyone's responsibility	Strongly agree	Count	486	1891	2351
		Row %	10.3%	40.0%	49.7%
	Agree	Count	672	1715	1891
		Row %	15.7%	40.1%	44.2%
	Disagree	Count	165	288	315
		Row %	21.5%	37.5%	41.0%
	Strongly disagree	Count	32	59	53
		Row %	22.2%	41.0%	36.8%
agree or disagree- i feel my community is committed to preventing youth from smoking.	Strongly agree	Count	176	545	535
		Row %	14.0%	43.4%	42.6%
	Agree	Count	769	2178	2530
		Row %	14.0%	39.8%	46.2%
	Disagree	Count	327	995	1311
		Row %	12.4%	37.8%	49.8%
	Strongly disagree	Count	58	124	131
		Row %	18.5%	39.6%	41.9%

			cigarettes smoking	# of cigarettes/day				
			Yes	1-10 cigarettes	11-20 cigarettes	21-30 cigarettes	31-40 cigarettes	41 or more cigarettes
when eating out, which do you prefer	A restaurant that is smoke free	Count	138	73	42	14	2	
		Row %	2.6%	55.7%	32.1%	10.7%	1.5%	
	A restaurant with designated smoking/non- smoking sections	Count	1086	380	442	187	58	14
		Row %	24.8%	35.2%	40.9%	17.3%	5.4%	1.3%
	A restaurant that allows smoking anywhere	Count	127	24	49	24	16	11
		Row %	53.1%	19.4%	39.5%	19.4%	12.9%	8.9%
how much of a problem is tobacco use by young people	Not a problem	Count	66	18	24	12	8	3
		Row %	17.7%	27.7%	36.9%	18.5%	12.3%	4.6%
	A minor problem	Count	379	127	166	56	24	7
		Row %	20.1%	33.4%	43.7%	14.7%	6.3%	1.8%
	A moderate problem	Count	684	244	260	122	36	11
		Row %	12.6%	36.3%	38.6%	18.1%	5.3%	1.6%
	A serious problem	Count	183	72	63	34	7	4
		Row %	9.4%	40.0%	35.0%	18.9%	3.9%	2.2%

Report
age

cigarettes smoking	how much of a problem is tobacco use by young people	Mean	N	Std. Deviation
Yes	Not a problem	51.38	64	16.124
	A minor problem	47.97	377	15.469
	A moderate problem	48.30	676	13.867
	A serious problem	46.86	180	13.281
	Total	48.15	1297	14.399
No, I have stopped smoking	Not a problem	72.65	158	14.182
	A minor problem	61.68	732	17.191
	A moderate problem	59.67	2112	15.959
	A serious problem	58.05	783	15.407
	Total	60.26	3785	16.266
No, I have never smoked	Not a problem	66.05	126	19.670
	A minor problem	54.68	738	20.042
	A moderate problem	53.64	2565	18.113
	A serious problem	53.31	943	17.410
	Total	54.10	4372	18.466
Total	Not a problem	66.34	348	18.358
	A minor problem	56.08	1847	18.782
	A moderate problem	55.34	5353	17.232
	A serious problem	54.65	1906	16.591
	Total	55.75	9454	17.588

SES stressors:

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
feel positive	Almost always	Count	484	1782	2116	135	4123
		Row %	11.0%	40.7%	48.3%	3.2%	96.8%
	Often	Count	536	1484	1766	109	3596
		Row %	14.2%	39.2%	46.6%	2.9%	97.1%
	Occasionally	Count	279	600	650	49	1442
		Row %	18.2%	39.2%	42.5%	3.3%	96.7%
	Almost never	Count	41	62	56	9	143
		Row %	25.8%	39.0%	35.2%	5.9%	94.1%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
personal loss, stress, misfortune	Yes	Count	603	1362	1612	105	3382
		Row %	16.9%	38.1%	45.1%	3.0%	97.0%
	No	Count	743	2585	2996	199	5970
		Row %	11.7%	40.9%	47.4%	3.2%	96.8%
church support	Receive support from church	Count	391	1922	2576	109	4630
		Row %	8.0%	39.3%	52.7%	2.3%	97.7%
family support	Receive support from family	Count	939	2964	3733	203	7252
		Row %	12.3%	38.8%	48.9%	2.7%	97.3%
Friends support	Receive support from friends	Count	833	2321	3164	161	6015
		Row %	13.2%	36.7%	50.1%	2.6%	97.4%
I manage alone	1	Count			1		1
		Row %			100.0%		100.0%
	I manage alone	Count	391	829	888	86	1986
		Row %	18.5%	39.3%	42.1%	4.2%	95.8%
other support/ specify	Receive other support	Count	66	152	200	11	399
		Row %	15.8%	36.4%	47.8%	2.7%	97.3%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
sadness; loss of interest	Yes	Count	459	835	887	72	2062
		Row %	21.0%	38.3%	40.7%	3.4%	96.6%
	No	Count	879	3024	3640	230	7116
		Row %	11.7%	40.1%	48.3%	3.1%	96.9%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
kids using tobacco	Yes	Count	95	150	112	14	341
		Row %	26.6%	42.0%	31.4%	3.9%	96.1%
	No	Count	420	988	1398	106	2672
		Row %	15.0%	35.2%	49.8%	3.8%	96.2%
	Don't know	Count	30	47	53	12	115
		Row %	23.1%	36.2%	40.8%	9.4%	90.6%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
people in household/ 11 to 17 years old	0	Count	1063	3529	3831	250	7909
		Row %	12.6%	41.9%	45.5%	3.1%	96.9%
	1	Count	176	325	501	28	969
		Row %	17.6%	32.4%	50.0%	2.8%	97.2%
	2	Count	103	163	308	24	547
		Row %	17.9%	28.4%	53.7%	4.2%	95.8%
	3	Count	15	29	69	3	108
		Row %	13.3%	25.7%	61.1%	2.7%	97.3%
	4	Count	5	5	5	1	14
		Row %	33.3%	33.3%	33.3%	6.7%	93.3%
	5	Count	1		3	1	3
		Row %	25.0%		75.0%	25.0%	75.0%
	7	Count	1		1	1	1
		Row %	50.0%		50.0%	50.0%	50.0%
people in household/ 18 to 20 years old	8 or more	Count	1		3		4
		Row %	25.0%		75.0%		100.0%
	0	Count	1209	3796	4316	285	8764
		Row %	13.0%	40.7%	46.3%	3.1%	96.9%
	1	Count	136	215	351	19	682
		Row %	19.4%	30.6%	50.0%	2.7%	97.3%
	2	Count	16	36	50	3	98
		Row %	15.7%	35.3%	49.0%	3.0%	97.0%
	3	Count	2	2	1		5
		Row %	40.0%	40.0%	20.0%		100.0%
	4	Count		1	1		2
		Row %		50.0%	50.0%		100.0%
	5	Count		1			1
		Row %		100.0%			100.0%
people in household/ 21 years or older	6	Count	1				1
		Row %	100.0%				100.0%
	7	Count	1			1	
		Row %	100.0%			100.0%	
	8 or more	Count			2		2
		Row %			100.0%		100.0%
	0	Count	65	299	299	13	609
		Row %	9.8%	45.1%	45.1%	2.1%	97.9%
	1	Count	352	934	1274	64	2370
		Row %	13.8%	36.5%	49.8%	2.6%	97.4%
	2	Count	846	2550	2865	204	5965
		Row %	13.5%	40.7%	45.8%	3.3%	96.7%
	3	Count	79	198	205	16	458
		Row %	16.4%	41.1%	42.5%	3.4%	96.6%

4	Count	11	27	38	6	69
	Row %	14.5%	35.5%	50.0%	8.0%	92.0%
5	Count		7	4		11
	Row %		63.6%	36.4%		100.0%
6	Count		1			1
	Row %		100.0%			100.0%
7	Count	1		1	1	1
	Row %	50.0%		50.0%	50.0%	50.0%
8 or more	Count	11	35	35	4	71
	Row %	13.6%	43.2%	43.2%	5.3%	94.7%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No

Hispanic or Latino	Yes	Count	18	38	40	12	81
		Row %	18.8%	39.6%	41.7%	12.9%	87.1%
	No	Count	1315	3841	4476	289	9117
		Row %	13.7%	39.9%	46.5%	3.1%	96.9%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
White	White	Count	1326	3944	4601	298	9315
		Row %	13.4%	40.0%	46.6%	3.1%	96.9%
American Indian	1	Count	1				1
		Row %	100.0%				100.0%
	American Indian	Count	12	19	10	3	36
		Row %	29.3%	46.3%	24.4%	7.7%	92.3%
Black	Black	Count	3	3	4	2	8
		Row %	30.0%	30.0%	40.0%	20.0%	80.0%
Asian	Asian	Count	7	8	14	2	26
		Row %	24.1%	27.6%	48.3%	7.1%	92.9%
Other: please specify	Other: please specify	Count	9	19	30	4	52
		Row %	15.5%	32.8%	51.7%	7.1%	92.9%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
best describes you/ working one or more jobs	Working one or more jobs, self- employed or farmer 3	Count	944	1941	2720	203	5348
		Row %	16.8%	34.6%	48.5%	3.7%	96.3%
		Count		1	1		2
		Row %		50.0%	50.0%		100.0%
best describes you/ homemaker	Homemaker	Count	157	531	1006	11	1600
		Row %	9.3%	31.3%	59.4%	.7%	99.3%
best describes you/ retired	Retired	Count	231	1757	1443	84	3168
		Row %	6.7%	51.2%	42.1%	2.6%	97.4%
best describes you/ student	Student	Count	22	43	75	3	136
		Row %	15.7%	30.7%	53.6%	2.2%	97.8%
best describes you/ currently looking for work	Currently looking for work	Count	69	74	77	9	210
		Row %	31.4%	33.6%	35.0%	4.1%	95.9%
best describes you/ unable to work	Unable to work	Count	71	199	155	22	385
		Row %	16.7%	46.8%	36.5%	5.4%	94.6%
best describes you/ other	Other: please specify	Count	54	137	154	11	317
		Row %	15.7%	39.7%	44.6%	3.4%	96.6%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
gender	Male	Count	585	2169	1439	256	3907
		Row %	14.0%	51.7%	34.3%	6.1%	93.9%
	Female	Count	762	1775	3195	44	5463
		Row %	13.3%	31.0%	55.7%	.8%	99.2%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
marital status	Married	Count	792	2809	3061	202	6362
		Row %	11.9%	42.2%	45.9%	3.1%	96.9%
	Separated	Count	13	25	17	1	52
		Row %	23.6%	45.5%	30.9%	1.9%	98.1%
	Living Together	Count	85	57	56	19	180
		Row %	42.9%	28.8%	28.3%	9.5%	90.5%
	Widowed	Count	111	607	883	26	1434
		Row %	6.9%	37.9%	55.2%	1.8%	98.2%
	Divorced	Count	219	290	257	29	724
		Row %	28.6%	37.9%	33.6%	3.9%	96.1%
	Never been married	Count	126	181	376	29	644
		Row %	18.4%	26.5%	55.1%	4.3%	95.7%

education level

		cigarettes smoking			smokeless tobacco	
		Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
Some high school	Count	137	566	432	59	994
	Row %	12.1%	49.9%	38.1%	5.6%	94.4%
High school graduate	Count	509	1419	1408	96	3137
	Row %	15.3%	42.5%	42.2%	3.0%	97.0%
Vo-tech training or some college	Count	461	1001	1240	78	2579
	Row %	17.1%	37.0%	45.9%	2.9%	97.1%
Associates degree	Count	76	181	258	12	501
	Row %	14.8%	35.1%	50.1%	2.3%	97.7%
Bachelors degree	Count	91	389	788	30	1228
	Row %	7.2%	30.7%	62.1%	2.4%	97.6%
Post-graduate or professional degree	Count	47	281	408	13	716
	Row %	6.4%	38.2%	55.4%	1.8%	98.2%
Other: please specify	Count	31	155	123	16	278
	Row %	10.0%	50.2%	39.8%	5.4%	94.6%

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
Drinking behavior	non-drinker	Count	418	1545	2048	88	3748
		Row %	10.4%	38.5%	51.1%	2.3%	97.7%
	non-chronic drinker	Count	722	2115	2457	164	5054
		Row %	13.6%	40.0%	46.4%	3.1%	96.9%
	chronic drinker	Count	217	319	132	53	612
		Row %	32.5%	47.8%	19.8%	8.0%	92.0%
Binge drinking	unknown	Count	8	72	84	3	141
		Row %	4.9%	43.9%	51.2%	2.1%	97.9%
	non-binge/non-drinker	Count	868	3327	4056	183	7821
		Row %	10.5%	40.3%	49.2%	2.3%	97.7%
	binge drinker	Count	486	654	584	121	1596
		Row %	28.2%	37.9%	33.9%	7.0%	93.0%
	unknown	Count	11	70	81	4	138
		Row %	6.8%	43.2%	50.0%	2.8%	97.2%

Social pressure:

			cigarettes smoking			smokeless tobacco	
			Yes	No, I have stopped smoking	No, I have never smoked	Yes	No
anyone smoke inside your home	Yes	Count	718	244	199	61	1089
		Row %	61.8%	21.0%	17.1%	5.3%	94.7%
	No	Count	645	3766	4448	246	8376
		Row %	7.3%	42.5%	50.2%	2.9%	97.1%

27 Counties in 1998:

Health conditions:

		smoking	
		Yes	No, I have never smoked/I have stopped.
Arthritis	Count	262	2088
	Row %	11.1%	88.9%
Asthma	Count	102	605
	Row %	14.4%	85.6%
Cancer	Count	81	695
	Row %	10.4%	89.6%
Diabetes	Count	65	570
	Row %	10.3%	89.7%
Heart Disease	Count	67	816
	Row %	7.6%	92.4%
Liver Disease	Count	7	36
	Row %	16.7%	83.3%
Lung Disease	Count	31	178
	Row %	14.7%	85.3%
Mental Illness	Count	38	166
	Row %	18.7%	81.3%
Reaction to environmental toxins/chemicals/poisons	Count	43	210
	Row %	16.9%	83.1%
Stroke	Count	15	200
	Row %	7.0%	93.0%
Other Health Condition	Count	149	869
	Row %	14.6%	85.4%

		# of cigarettes/day			
		1-10 cigarettes	11-20 cigarettes	21-30 cigarettes	31-40 cigarettes
Arthritis	Count	87	83	45	22
	Row %	36.6%	35.1%	19.2%	9.1%
Asthma	Count	36	45	9	11
	Row %	35.5%	44.4%	9.0%	11.0%
Cancer	Count	34	24	7	9
	Row %	46.4%	32.3%	8.9%	12.4%
Diabetes	Count	16	20	13	8
	Row %	27.5%	34.6%	23.5%	14.4%
Heart Disease	Count	31	17	7	3
	Row %	52.9%	29.2%	12.4%	5.4%
Liver Disease	Count	1	4		
	Row %	23.8%	76.2%		
Lung Disease	Count	12	8	4	2
	Row %	47.0%	30.2%	14.6%	8.2%
Mental Illness	Count	15	15	3	5
	Row %	39.4%	39.4%	8.8%	12.5%
Reaction to environmental toxins/chemicals/poisons	Count	14	16	7	7
	Row %	31.8%	37.0%	15.7%	15.6%
Stroke	Count	8	6	2	0
	Row %	46.8%	38.9%	11.4%	2.9%
Other Health Condition	Count	53	45	30	6
	Row %	39.5%	34.0%	22.1%	4.4%

			smoking	
			Yes	No, I have never smoked/I have stopped.
# times drink/month	I don't drink	Count	421	3698
		Row %	10.2%	89.8%
	1-3 days	Count	550	2652
		Row %	17.2%	82.8%
	4-10 days	Count	405	1551
		Row %	20.7%	79.3%
	11-17 days	Count	138	471
		Row %	22.6%	77.4%
	18-24 days	Count	115	312
		Row %	26.9%	73.1%
	25 or more days	Count	120	315
		Row %	27.6%	72.4%
# drink/day	1	Count	196	2208
		Row %	8.2%	91.8%
	2	Count	390	1599
		Row %	19.6%	80.4%
	3	Count	316	816

5 or more drinks per sitting	4	Row %	27.9%	72.1%
		Count	189	370
	5	Row %	33.8%	66.2%
		Count	79	156
	6	Row %	33.6%	66.4%
		Count	75	99
	7	Row %	42.9%	57.1%
		Count	34	22
	8	Row %	60.6%	39.4%
		Count	19	22
	9	Row %	45.9%	54.1%
		Count	2	6
	more than 9	Row %	22.5%	77.5%
		Count	25	45
	0	Row %	35.6%	64.4%
		Count	687	4365
	1	Row %	13.6%	86.4%
		Count	245	696
	2	Row %	26.0%	74.0%
		Count	157	350
	3	Row %	30.9%	69.1%
		Count	93	192
	4	Row %	32.6%	67.4%
		Count	84	115
drunk driving/riding	5	Row %	42.2%	57.8%
		Count	42	83
	more than 5 times	Row %	33.5%	66.5%
		Count	67	121
	0	Row %	35.6%	64.4%
		Count	1288	7252
	1	Row %	15.1%	84.9%
		Count	130	389
	2	Row %	25.0%	75.0%
		Count	109	191
	3	Row %	36.3%	63.7%
		Count	40	56
	4	Row %	41.4%	58.6%
		Count	18	37
	5	Row %	33.1%	66.9%
		Count	7	42
	more than 5 times	Row %	14.9%	85.1%
		Count	27	80
		Row %	25.1%	74.9%

Main Findings of the Analysis:

1-The tobacco survey:

The data from the three-survey analysis were rather complete on most of the variables with very low missing values on variables. The comparison of the tobacco smoking survey results for the three separate analysis revealed that the 4 counties are in general doing better in terms of smoking rates compared to the state as a whole. Time wise, smoking rates have dropped from 1998 to 2002. the discrepancy in the design of the survey between the two time periods did not allow us to compare rates for those who abstained from smoking, rather those who smoke vs those who do not.

The smoking rate decline seems robust when one looks at the change in other variables over the 4-year period. For example, the percentage of those who currently smoke who reported that their health was excellent was lower for 2002 than for 1998. in addition respondents were more agreeing with statements like “kids more likely to smoke if adults around them do” in 2002.

An interesting but predictable finding is that the perception of how harmful smoking is was age dependent. Older respondent (in their seventies and more) were much less aware or agreeing with harmful effects of smoking.

2-Survey existing literature and past surveys:

Communicable diseases, specifically tuberculosis, were a concern of the agency especially with the relatively large Somali immigrant population that resided in the 4 counties over the past few years. The agency was also interested in the topic because of the general atmosphere of fear of bioterrorism attacks especially after September 11, 2001. The agency requested that I survey the prevalence of tuberculosis in these 4

counties. A report by the MDH revealed the very low number of incident cases of tuberculosis in the 4 counties over almost two decades of monitoring. The agency was also interested in knowing more about other communicable diseases such as Lyme disease but due to time constraints the

A special area of interest to LLMP-PHS was maternal and child health. The agency was specially interested in prenatal care and prenatal education and how they were related to other health behaviors such as tobacco smoking and alcohol drinking. A good source of information was Dr. Ann Kinney at the Minnesota Department of Health who was of great help and guidance. I communicated with her by email to try to answer the questions raised especially by public health nurses working in LLMP-PHS. Her help was much appreciated as she provided links to websites that had required data as well as referred me to individuals inside MDH whom she thought were more helpful in answering the specific questions I had.

General statewide information was found on tobacco smoking and pregnant women, however data needed to be requested from MDH and we did not pursue this further because of the time limits and deadline associated with this assistantship position. Data on alcohol use during pregnancy was not recommended for analysis by Dr. Kinney because of the bad quality of the data collected due to much missing data.

3- Water testing Lab

The agency supports a water testing lab that provides services to the four counties and to neighboring counties as well as commercial services to owners of private wells and surface water (i.e. rivers and lakes). The lab does organic as well as mineral

testing to determine water quality and whether or not it is appropriate for irrigation or drinking purposes. When I examined the reports of the lab for 5 years, I recognized the services provided by the lab have been increasing in numbers. While this might be totally attributable to natural reasons, the fact that the services of the lab are now open to individuals who own private farms makes the increase in the demand for the lab's services a real rather than an artifact of the natural conditions.

The financial system set up in the lab are not standard and have been varying over the past few years in terms of weighing individual tests and what percentage of tests is utilized by the private sector. This fact did not allow for a meaningful comparison of the financial performance of the lab over the years where data were available.

4-Survey of community leaders:

As mentioned earlier in the beginning of the report, LLMP-PHS aimed to identify and pursue the public health needs of the 4 counties. With the cut in funding, the agency had to prioritize. Part of this prioritization process was querying public health priorities based on the perceptions of community leaders. I was asked by the agency to assess a survey of community leaders that the agency has developed at an earlier time. The survey had question on each of the public health domains of the MDH priorities list. Using my survey expertise, I examined each of the questions separately to identify any problems with the format or wording of the questions, or if there was any obvious bias in the way the question was phrased. Following this procedure, I met with the agency team by teleconferencing. The survey was discussed in detail and a final product was agreed upon. I was informed by the agency director that the survey was sent to community leaders and the results analyzed. I do not have information on what the results were.

Main recommendations:

- 1- The agency might want to pursue tobacco initiatives that they already have and to seek funding for these projects at all levels. The reduction in the number of smokers and the increased awareness of the harms of tobacco should be worked on at the school level and throughout the community.
- 2- The agency might want to investigate the available databases on tobacco in more depth using more sophisticated data analysis especially to feed decision making in designing future tobacco prevention and education programs.
- 3- The agency's focus on communicable diseases might be targeted at diseases other than tuberculosis now that the agency is aware of the low prevalence of such disease.
- 4- The agency seems to have great interest in maternal and child health especially as it relates to health behaviors among teenagers. With scarce information in this area at the state level and with the seemingly policy relatedness of this issue, the agency might want to explore funding opportunities to study these behaviors and their effects.
- 5- The agency's water testing lab is an important asset to the agency, especially knowing the uniqueness of the services it provides over a large geographic area. The financial system of the lab needs to be standardized and updated so that financial analysis of the performance of the lab is assessed and further forecasted.

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